

**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF WISCONSIN**

RAFFEL SYSTEMS, LLC,

Plaintiff,

v.

Case No. 18-CV-1765

**MAN WAH HOLDINGS LTD, INC.,
MAN WAH (USA) INC., and XYZ
COMPANIES 1-10,**

Defendants.

**DECISION AND ORDER ON DEFENDANTS'
MOTION TO CORRECT INVENTORSHIP**

Raffel Systems, LLC alleges that it is the owner by assignment of all rights, titles, and interests in four utility patents for lighted cup holders for seating arrangements¹ and one design patent for the ornamental design of the cup holders.² Raffel sues Man Wah Holdings Ltd., Inc., Man Wah (USA) Inc., and XYZ Companies 1–10 (collectively “Man Wah”) alleging that Man Wah is making, using, offering for sale, selling, importing, and/or distributing products that infringe Raffel’s patents. (Counts 2, 6, 9, 10, 11, 12, and 15 of Fourth Am. Compl., Docket # 108.) In response to Raffel’s Fourth Amended Complaint, Man Wah asserts several affirmative defenses³ and counterclaims⁴ alleging that Raffel’s utility patents

¹ U.S. Patent No. 8,973,882; U.S. Patent No. 10,051,968; U.S. Patent No. 8,714,505; U.S. Patent No. 7,766,293.

² U.S. Patent No. D643,252.

³ Affirmative defenses 13–15. (Man Wah’s Answer, Affirmative Defenses, and Counterclaims, Docket # 133 at 25–27.)

⁴ Counterclaims 22–26. (Docket # 133 at 47–50.)

are invalid due to Raffel's failure to name Michael Burwell, a former Raffel employee, as a co-inventor of the patents. Man Wah asserts that Burwell also signed a non-disclosure agreement and assignment of rights, which purports to transfer to Man Wah whatever rights Burwell has in the Asserted Utility Patents. Man Wah paid Burwell \$60,000.00 for his cooperation in this matter. Man Wah asserts that if the Court names Burwell as an inventor, Burwell's rights in the five Asserted Utility Patents will extend to Man Wah based on this assignment.

Man Wah sought a hearing under Fed. R. Civ. P. 42(b) to correct inventorship of the utility patents pursuant to 35 U.S.C. § 256. (Docket # 144.) The motion for a hearing was granted and a two-day bench trial was held on November 16, 2020 and November 17, 2020. (Docket # 265, Docket # 266.) The parties submitted post-trial briefs. Thus, the issue of correction of inventorship is fully briefed and ready for resolution. For the reasons explained below, I find that Man Wah has failed to meet its burden of establishing by clear and convincing evidence that Burwell is a joint inventor of the utility patents asserted by Raffel in this case. As such, Raffel will not be ordered to obtain a certificate of correction from the United States Patent and Trademark Office.

BACKGROUND FACTS

Over the course of a two-day bench trial, the parties presented evidence in the form of testimony—both deposition and live—and documents that Man Wah argues serves to corroborate Burwell's claim of joint inventorship. Burwell, John Howman, Ken Seidl, Dave Alpert, and Paul Stangl⁵ testified at the bench trial.

⁵ Although Stangl is the current CEO and executive chairman at Raffel, he did not become involved in Raffel until 2008, several years after the alleged conception of the utility patents at issue in this case. (Nov. 17 Tr. 217–18, 249.) As such, Stangl's testimony is of little relevance to the issue of inventorship and will not be summarized in detail here.

Michael Burwell

Burwell graduated from college in 2002 with a bachelor's degree in electrical engineering technology. (Transcript of Nov. 16, 2020 Bench Trial ("Nov. 16 Tr.") at 20, Docket # 269.) After college, Burwell worked several jobs (including catering and assembling and testing power inverters) before joining Raffel Product Development as a technician in the engineering department. (Nov. 16 Tr. at 20–22.) When Burwell first joined the company, Raffel sold massage and motion controls for furniture and Burwell started by making repairs and doing product testing. (Nov. 16 Tr. 22.) Two or three years later, Raffel Product Development went into receivership and the company was purchased by John Howman and Sue Marks, who renamed the business Raffel Comfort Sciences. (Nov. 16 Tr. 23–24.) At Raffel Comfort Sciences, Burwell worked as an engineer. (Nov. 16 Tr. 24.) The only two employees to remain after the company's change in ownership were Burwell and Ken Seidl. (*Id.*) Burwell testified that Howman wanted to take the company in a different direction, seeking to sell completed massage chairs and other retail products such as memory foam pillows. (Nov. 16 Tr. 24–25.) While employed by Raffel Comfort Sciences, Burwell's job duties and responsibilities centered primarily on writing manuals for technicians to repair the chairs Howman imported from China and working with people over the phone to repair the chairs when there was an issue. (Nov. 16 Tr. 25.) Raffel Comfort Sciences employed five or six people and Burwell reported to Howman. (*Id.*)

Burwell also worked with Seidl at Raffel Comfort Sciences. (*Id.*) Burwell testified that Seidl handled "more the OEM [original equipment manufacturer] business, which was what Raffel originally was mainly doing, and so I would work with him on customer requirements for products, new products, changing products for another customer, wire length, that kind

of stuff.” (Nov. 16 Tr. 25–26.) After Howman purchased the company, the other electrical technicians were let go. Thus, Burwell was the only electrical technician remaining at Raffel Comfort Sciences. (Nov. 16 Tr. 26.)

Burwell testified that either at the end of 2005 or the beginning of 2006, Howman hired Global Product Solutions (“GPS”), a company owned by Dave Alpert, to do much of the OEM product development. (Nov. 16 Tr. 27–28, 101.) Howman and Seidl were going over a cup holder that Alpert’s company had been working on and were dissatisfied with its functions. (Nov. 16 Tr. 28.) Burwell rarely interacted with Alpert or any of Alpert’s GPS colleagues. (*Id.*) During a meeting with Howman and Seidl that Burwell testified lasted only a couple of minutes (Nov. 16 Tr. 134–35), Burwell stated that he saw a sample of Alpert’s lighted cup holder and described it as follows: “It was a plastic cup holder with like a Plexiglas or a clear acrylic disk that in the bottom with some LED’s underneath it” (Nov. 16 Tr. 28–29). Burwell testified that he did not know who originally thought of the idea of having a lighted cup holder, because “it had already existed when I came into the conversation.” (Nov. 16 Tr. 29.) Burwell testified, however, that he suggested to Howman and Seidl that the light at the bottom of the cup holder needed to spread around more, and that they needed to use a light pipe to accomplish this. (*Id.*) Burwell described a “light pipe” as “it’s kind of like a -- like a fiber, like fiber-optics when we shine light into the end of a fiber-optic, the light gets trapped inside the -- the material until it hits -- effect or some kind of inclusion in the material that it defects [sic] off of.” (*Id.*) Burwell testified that light pipes are frequently used in other products, like laptops. (*Id.*) With regard to the idea to use a light pipe to better disperse the light, Burwell testified that he made some reference drawings so that samples could be made in China. (Nov. 16 Tr. 29–30.)

Burwell further testified that during his work on the lighted cup holder, “[a]t some point,” he suggested that “it would be cool if the lights went -- the cup holder went on when the ambient room light went off.” (Nov. 16 Tr. 31.) Burwell suggested using a photocell, which is commonly used in products such as nightlights. (Nov. 16 Tr. 32.) He testified that he purchased the photocells and attached one to the lighted cup holder by drilling a hole in the flange, or the “lip that went over the -- covered the edges of the hole in the armrest in the seating,” and just glued it in. (Nov. 16 Tr. 32–33.) Burwell located it there because it needed to sense the ambient light and the flange was the only part of the cup holder exposed to the ambient light in the room. (Nov. 16 Tr. 33.) Burwell testified that the GPS cup holder designed by Alpert that he saw in Howman’s office did not have a light sensor. (*Id.*)

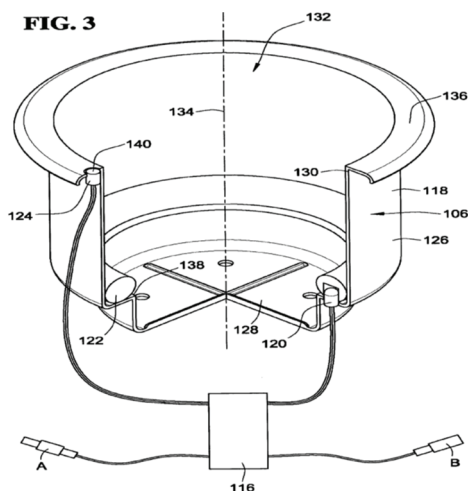
Burwell testified that he also worked on designing a touch sensor during his work on the lighted cup holder. (Nov. 16 Tr. 34.) Burwell stated that Raffel needed a version of the cup holder that turned on and off with some kind of switch, so Burwell recommended a touch switch to control the light. (*Id.*) Burwell used a thumb tack and placed it in the hole that they had drilled in the cup holder for the light sensor and “used that as the area of the cup that you touched to turn it on and off.” (*Id.*) Burwell testified that Alpert’s design did not contain a touch sensor. (Nov. 16 Tr. 35.)

Burwell testified that he also came up with a main or primary/secondary circuit arrangement so that only one of the cups needed to sense the ambient light and the other, secondary, cups were controlled by the primary cup. (Nov. 16 Tr. 38–39.) He was familiar with these types of circuit arrangements from working on computers, where one drive would have a “jumper pin” setting and could control other drives. (Nov. 16 Tr. 39.) Burwell testified that he created a drawing on February 16, 2006 of the lighted cup holder system, showing the

primary/secondary circuit. (Nov. 16 Tr. 37, Ex. TX-237.) Burwell created an additional drawing on March 1, 2006, showing a “daily chain configuration” of circuits. (Ex. TX-237.) Burwell testified that the drawing showed “overall the system of cup holders that would get installed in a row of home theater seating, so each -- each home section would have four cup holders, a primary, and three secondaries that were controlled by the primary one, and wall transformer to plug into the wall for power.” (Nov. 16 Tr. 38.) Burwell testified that Seidl’s role in developing the lighted cup holder involved taking the prototype that Burwell made and showing it to the customer for feedback regarding requirements for installation, such as wire lengths needed. (Nov. 16 Tr. 35–36.) Burwell testified that he got specifications from Seidl, who would have gotten the specifications from the customer, and created two additional drawings dated March 1, 2006, showing specifications in inches for the primary and secondary cupholders. (Nov. 16 Tr. 40; Ex. TX-237.)

Burwell further testified that the drawing he created entitled “lighted cup holder system overview,” contained a reference to a “junction board,” which he explained was a circuit board. (Nov. 16 Tr. 41.) Burwell testified that he worked on circuit boards during the development of the lighted cup holder, including schematics, circuit board drawings, wire harness drawings, etc., but that he no longer had the drawings. (*Id.*) Burwell identified circuit boards, dated March 10, 2006, that he testified he created while developing the lighted cup holder. (Nov. 16 Tr. 42–43, Ex. TX-224.) Burwell testified that the circuit board depicted in Exhibit TX-224 and numbered MWH-RAF0029619 was the circuit board from the junction box of the primary cup holder with a light sensor. (Nov. 16 Tr. 44.) Burwell testified that the two white circuit boards depicted in Exhibit TX-224 and numbered MWH-RAF0029624 were the touch control circuit boards that operated with the cup holder. (Nov. 16 Tr. 47.) Citing to

Fig. 3 of the '293 Patent, Burwell testified that the light ring he developed is depicted in 122, the LED light shining into the end of the light ring is depicted in 120, the photocell sensor is depicted in 124, and the junction box is depicted in 116. (Nov. 16 Tr. 51–52.)



Burwell further testified that Fig. 2 of the '293 Patent depicts the circuit drawing for the primary cup holder that he drew dated February 16, 2006. (Nov. 16 Tr. 53, Ex. TX-237.) Burwell testified that Raffel Comfort Systems eventually went bankrupt and was purchased by Seidl and Paul Stangl. (Nov. 16 Tr. 55.) Burwell continued to work at Raffel until 2009 when he took a job at Rockwell Automation. (Nov. 16 Tr. 55–56, 64.)

John Howman

Howman testified that he purchased Raffel Comfort Sciences at a Wisconsin Chapter 128 auction in 2004 with his business partner, Susan Marks. (Nov. 16 Tr. 147.) Howman owned Raffel Comfort Sciences from 2004 until 2008, serving as its president. (Nov. 16 Tr. 148.) When Howman took over Raffel, he moved the company into selling more direct consumer products, such as massage chairs and heated stadium cushions. (Nov. 16 Tr. 149.) Howman testified that sometime in 2005, Raffel entered into a contract with GPS in which GPS was to have two main roles—(1) find factories to manufacture Raffel's products and (2)

assist in graphic design for packaging or retail products and in some cases do more sophisticated 3D renderings of product ideas. (Nov. 16 Tr. 161–62.) Howman also testified that GPS provided Raffel with engineering support. (Nov. 16 Tr. 162.) Howman testified that it was typical for Seidl to return from the furniture markets with a notebook full of ideas for new products that customers were asking about. (Nov. 16 Tr. 165.) Howman testified that he could not specifically recall “where we were sitting or what we were doing” when Seidl brought up the idea of a lighted cup holder, but stated that he could not recall Burwell participating in the discussion. (*Id.*) Howman further testified that he could not recall one way or the other whether Burwell made any suggestions regarding use of a photocell, using a main/secondary configuration, or using a touch sensor; however, he believed Burwell did not make these suggestions because he would not have been involved in strategic discussions around product design or development. (Nov. 16 Tr. 172–73.)

Howman testified that on January 26, 2006, he sent an email to his patent attorney, Les Miller, asking for patent disclosure forms. (Nov. 16 Tr. 166, Ex. PTX87.) Howman testified that the first attachment to his email was a 3D rendered image produced by GPS of a design for a cup holder. (Nov. 16 Tr. 167.) He testified that it must have come from GPS because Raffel did not have the software at that time to produce 3D rendered images. (*Id.*) At the top of the 3D image reads the following handwritten notes: “Tube of fiber optics. Ring + circle. Lights on when you turn of the lights. Lights off when you turn on the lights.” (Nov. 16 Tr. 168, Ex. PTX87.) Howman testified that it was not his handwriting on the image, but he presumed that it was Seidl’s handwriting, outlining the features of the cup holder. (Nov. 16 Tr. 168.)

Dave Alpert

Alpert testified that his company, Global Product Solutions, worked predominately on five or six products with Raffel. (Videotaped Deposition Transcript of David Alpert (“Alpert Dep. Tr.” at 14, Docket # 272-4.) Specifically, GPS worked on a variety of cup holders for Raffel, the first one being the cup holder at issue in this case. (*Id.*) Alpert testified that he had “quite a bit” of experience manufacturing “novelty lights using LED tubing” designed for automobiles. (Alpert Dep. Tr. 14–15.) Alpert testified that he came up with the idea of a battery operated lighted cup holder. (Alpert Dep. Tr. 16) Alpert described the product as follows:

[T]he way it was originally designed was plastic insert that would fit into a cup in a cup holder in a car. One of the --you know, at the time back in those days they were making cup holders without any kind of lighting in it, so at night it was somewhat difficult to see where the cup went.

The product that we were using that made this unique was LED -- LED tubing, so you could basically light up the tube and it would create an aesthetic glow around the cup rim and be able to see what it looked like. The original design was just a plastic insert with -- with that LED tubing right at the top of it and you would just set it down in the cup holder just like you would normally set a cup into it. It was thin enough so that you could still get -- once you put it into the insert in the car, you could still put a cup into it.

(Alpert Dep. Tr. 16–17.)

Pursuant to the agreement between GPS and Raffel, Alpert testified that GPS would be providing two main services to Raffel: (1) provide Raffel with products GPS previously designed that would contribute to Raffel’s product lines and (2) provide Raffel with enhancements to designs Raffel was already working on and assist with engineering and sourcing of product. (Alpert Dep. Tr. 27.) Alpert testified that the lighted cup holder was an example of the first service GPS provided to Raffel, as the lighted cup holder he worked on with Raffel was one he previously conceived for Walgreens prior to contracting with Raffel.

(Alpert Dep. Tr. 27–28.) Alpert identified a photograph of a cup holder as a 3D rendering that GPS produced to show to Walgreens. (Alpert Dep. Tr. 31, Ex. 5 to Alpert Dep. (entered as Ex. PTX11.)) Alpert identified a two dimensional engineering drawing by Reuben Canales (a GPS employee who did design work, *see* Nov. 17 Tr. 272) depicting how GPS’ original Walgreens design could be modified for Raffel and its chairs (Alpert Dep. Tr. 33, Ex. PTX11, Docket # 259-2 at 8). On the schematic, it notes “Global Production” and “LED Cup Insert w/Massage,” which Alpert testified showed that GPS created this design. (Alpert Dep. Tr. 33–34.) Alpert testified that he and Canales conceived of the cup holder design with a flange containing switches for massage functionality. (Alpert Dep. Tr. 34–35.) He testified the idea was conceived either right before he signed the June 2005 agreement with Raffel (to show the value GPS could bring to Raffel), or right after. (Alpert Dep. Tr. 35.)

Alpert testified that all of Raffel’s engineering and design work came from GPS. (Alpert Dep. Tr. 37.) Alpert’s primary contact at Raffel was Seidl and Seidl primarily interacted with Bruce Schmidt (a GPS engineer, *see* Nov. 17 Tr. 272) and Canales (Alpert Dep. Tr. 37–38). Alpert stated that when GPS first contracted with Raffel, Raffel was predominantly making handheld massage units. (Alpert Dep. Tr. 40.) As the home theater furniture business grew significantly at that time, GPS recommended to Raffel that it sell cup holders with integrated massage functionality, an idea conceived by GPS. (Alpert Dep. Tr. 40–41.)

Regarding the patents at issue, Alpert testified that he was either responsible for each claim, or the claim was a collaborative effort between himself, Canales, and Schmidt of GPS and Seidl and Howman of Raffel. (Alpert Dep. Tr. 81–86, 96–102.) Alpert testified that he could not specifically remember Burwell, nor could he recall Burwell attending any of the

meetings with Raffel that he was involved in. (Alpert Dep. Tr. 111–12.) Alpert stated, however, that Burwell “might have been involved in” discussions with Canales, Schmidt, Howman, and Seidl, but that he could not recall Burwell attending meetings where Alpert was present. (Alpert Dep. Tr. 112–13.) Alpert testified that GPS never received any drawings or schematics from Raffel as to Raffel’s newer products and designs because GPS was “driving all of that.” (Alpert Dep. Tr. 113.) Alpert testified that while Burwell may have worked on a circuit board design to control the functionalities of the lighted cup holder, he did not come up with the ideas of the light pipe, photocell, or touch sensor because those things were already a part of GPS’ original recommendations in the product. (Alpert Dep. Tr. 117–18.) As for the primary/secondary circuit, Alpert testified that it was a collaborative process between Alpert, Schmidt, Canales, and Seidl to make the product work within the products of Raffel’s customers. (Alpert Dep. Tr. 117.) Alpert testified that while it was possible Burwell could have been working on “developing some functionality and some control boards to control the functionalities,” he “didn’t come up with the ideas for the product.” (Alpert Dep. Tr. 118.)

Ken Seidl

Seidl began working for Raffel in January 1993. (Transcript of Nov. 17, 2020 Bench Trial “Nov. 17 Tr.” at 255, Docket # 270.) Seidl is currently the Vice President of Sales at Raffel Systems. (*Id.*) Seidl testified that Burwell was a technician at Raffel, a “back room guy, so if the engineers needed someone to solder components, for example, onto a circuit board or maybe do a modification at their direction. He also did other back room work. He helped out with our shipping/receiving at times.” (Nov. 17 Tr. 270.) Seidl testified that during 2005–2006, Burwell’s tasks at Raffel included drawing basic, 2D schematics, soldering on a circuit

board, and preparing other basic drawings at Seidl's direction. (Nov. 17 Tr. 270–71.) The bulk of Raffel's engineering work went to GPS. (Nov. 17 Tr. 271.)

Seidl identified a 3D computer-aided design, or CAD, drawing of one of Raffel's cup holders, created by Schmidt at GPS. (Nov. 17 Tr. 279, Ex. PTX 135.) Seidl testified that he first saw the document in late 2005 or very early 2006. (Nov. 17 Tr. 279.) Seidl identified aspects of the CAD drawing marked as RAF3052538: the red ring at the bottom of the cup holder represented "clear plastic translucent material" that would glow when a light was added to it and described the green dot at approximately the three o'clock position of the rim of that cup as a photocell. (Nov. 17 Tr. 279–80, Ex. PTX 135.) Seidl testified that the cup holder shows the design Raffel's customer Berkline was using, with Seidl's suggestion of putting a light in the bottom of the cup. (Nov. 17 Tr. 281.) He stated that Burwell did not contribute to the product or drawing. (*Id.*)

During Seidl's July 31, 2019 deposition, he testified that he first conceived of the idea of a lighted cup holder after attending the High Point furniture market in October 2005. (Seidl Dep. at 44–45, Docket # 272-1.) Seidl testified that shortly after returning from the market, he sat down with Howman and Burwell, showed them a sample cup holder he received from Berkline, and asked them how a light could be added to it. (*Id.*) Seidl testified that Burwell, an engineering technician, had some ideas of how to control the circuit, such as using a photocell. (*Id.* at 45.) Seidl stated that he was "pretty sure" Burwell made the suggestion regarding using a photocell because Burwell was "really our only engineering tech in-house." (*Id.* at 45–46.) Seidl testified that while he knew that photocells existed, Burwell was "more the tech type of guy," younger than Seidl, and generally familiar with photocells. (*Id.* at 49.) Seidl also testified that it was "probably [Burwell's] idea" to mount the photocell on the top

of the cup holder; however, acknowledged that because the photocell needed to be exposed to ambient light to function, the top was the logical place to mount it. (*Id.* at 50.) Seidl further testified that he was certain that Burwell “drew up the circuit” because he was the only in-house talent at the time who could draw a simple circuit. (*Id.* at 51–52.) He also testified that “Raffel,” or he, Howman, and Burwell came up with the idea of the primary/secondary circuit configuration. (*Id.* at 70.)

During trial, however, Seidl explained what led to the conception of the lighted cup holder as follows. Seidl attended the High Point furniture market in October 2005 and met with one of his customers, Berkline. (Nov. 17 Tr. 286.) Berkline had a show room at the market for home theater furniture; specifically, chairs linked together to create a row of seating. (Nov. 17 Tr. 293.) The home theater furniture contained molded black plastic cup holders with no controls or function. (Nov. 17 Tr. 294.) Seidl testified that he walked into the showroom, sat down in a chair, and as he was sitting in the chair in the dark room, the idea entered his mind to place a light in the cup holder. (Nov. 17 Tr. 294–95.)

Seidl testified that upon returning to the office, he met with Howman and recommended Raffel pursue his idea. (Nov. 17 Tr. 296.) Seidl testified that he did not speak with Burwell at any time immediately after the show about his idea. (*Id.*) Seidl stated that his next step was to bring in GPS and go over his idea with them, so GPS could “take it to the next level.” (Nov. 17 Tr. 296–97.) Seidl testified that he met with Schmidt and Canales and coordinated taking his idea and creating some renderings and drawings. (Nov. 17 Tr. 298–99.) Seidl identified Exhibit PTX11 as containing drawings and renderings that GPS presented to Seidl sometime in 2005. (Nov. 17 Tr. 299–300, Ex. PTX11.) Seidl testified that when Canales and Schmidt presented the drawings to him, he thought “they looked great”

and that Canales “did an excellent job portraying exactly what [Raffel] wanted to accomplish here.” (Nov. 17 Tr. 301.) Seidl identified the first page of Exhibit PTX11, entitled “Raffel: LED Cup Insert,” as “essentially the black plastic cup that [Seidl] described earlier in Berkline’s showroom with the addition of [his] idea of which would be adding a light to that cup.” (Nov. 17 Tr. 301.) Seidl identified the second page of Exhibit PTX11, entitled “Raffel: LED Cup Insert w/Massage Controls” as the “basic cup that we just saw on screen one,” but with “a little bump-out area on there that shows two controls . . . a zone one and a zone two for massage.” (Nov. 17 Tr. 302.) Seidl testified that Burwell was not involved at all in the project at the time Seidl saw these renderings. (Nov. 17 Tr. 303.)

Seidl testified that GPS sourced the test cup holders based on the renderings. (Nov. 17 Tr. 319.) However, Seidl initially procured black, molded cup holders from Berkline, gave them to GPS, and GPS began the process of getting drawings done and sending materials to China to start the process of building test samples. (*Id.*) Testing on the cup holders began on February 20, 2006. (Nov. 17 Tr. 327.) Seidl testified that Burwell became involved in the cup holder project late in the development stage, after the testing process had started. (Nov. 17 Tr. 330.) Seidl stated that Burwell was involved because Raffel needed some basic drawings to show to Berkline to explain, for example, the daily chain configuration. (Nov. 17 Tr. 330–31.) Seidl testified that Burwell’s drawing, dated March 1, 2006, of a daisy chain configuration (Ex. PTX65) was prepared at Seidl’s direction (Nov. 17 Tr. 343). Seidl testified that Burwell’s drawing entitled “Lighted Cup Holder System Overview,” dated February 16, 2006, is a schematic depicting renderings GPS created in November 2005. (Nov. 17 Tr. 344, Ex. PTX65.)

Seidl testified that he met with Berkline's product development department on February 28, 2006 to tailor the cord lengths and connection points so that the cup holders would work best for its products. (Nov. 17 Tr. 345–46.) Seidl identified handwritten notes and sketches that he drew during that meeting. (Nov. 17 Tr. 346, Ex. PTX110.) The handwritten notes show dimensions for both the primary and secondary cup holder units. (Ex. PTX110.) Seidl testified that he returned to Raffel and gave his notes to Burwell, instructing him to make a drawing. (Nov. 17 Tr. 344–45.) Seidl identified Exhibit PTX65, RAF1256–RAF1257, dated March 1, 2006, as the drawings Burwell created at Seidl's direction. (Nov. 17 Tr. 345.) These drawings are schematics of both the primary and secondary cup holder specifications, utilizing the same dimensions outlined by Seidl in his February 28, 2006 notes. (Ex. PTX65, RAF1256–RAF1257.)

Seidl explained the apparent conflict between his previous deposition testimony and his trial testimony by stating that during his deposition he was guessing as to the timeframe of events and that after his deposition, he reviewed his Berkline folder and realized the correct timeline of events. (Nov. 17 Tr. 297–98.)

LEGAL STANDARDS

Patent issuance creates a presumption that the named inventors are the true and only inventors of the patent. *Ethicon, Inc. v. U.S. Surgical Corp.*, 135 F.3d 1456, 1460 (Fed. Cir. 1998). If, however, an inventor is omitted from a patent, “the Director may, on application of all the parties and assignees, with proof of the facts and such other requirements as may be imposed, issue a certificate correcting such error.” 35 U.S.C. § 256(a). Section 256 further provides that the “error of omitting inventors . . . shall not invalidate the patent in which such error occurred if it can be corrected as provided in this section. The court before which such

matter is called in question may order correction of the patent on notice and hearing of all parties concerned and the Director shall issue a certificate accordingly.” *Id.* § 256(b).

A patented invention may be the work of two or more joint inventors. *See* 35 U.S.C. § 116 (1994). Because “[c]onception is the touchstone of inventorship,” each joint inventor must generally contribute to the conception of the invention. *Burroughs Wellcome Co. v. Barr Lab., Inc.*, 40 F.3d 1223, 1227–28 (Fed. Cir.1994). “Conception is the ‘formation in the mind of the inventor, of a definite and permanent idea of the complete and operative invention, as it is hereafter to be applied in practice.’” *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1376 (Fed. Cir. 1986) (quoting 1 Robinson on Patents 532 (1890)). An idea is sufficiently “definite and permanent” when “only ordinary skill would be necessary to reduce the invention to practice, without extensive research or experimentation.” *Burroughs Wellcome*, 40 F.3d at 1228.

For the conception of a joint invention, each of the joint inventors need not “make the same type or amount of contribution” to the invention. 35 U.S.C. § 116. Rather, each needs to perform only a part of the task which produces the invention. *Ethicon*, 135 F.3d at 1460. On the other hand, one does not qualify as a joint inventor by merely assisting the actual inventor after conception of the claimed invention. *Id.* “One who simply provides the inventor with well-known principles or explains the state of the art without ever having ‘a firm and definite idea’ of the claimed combination as a whole does not qualify as a joint inventor.” *Id.* A co-inventor need not make a contribution to every claim of a patent; a contribution to one claim is enough. *Id.* “Thus, the critical question for joint conception is who conceived, as that term is used in the patent law, the subject matter of the claims at issue.” *Id.*

To show co-inventorship, the alleged co-inventor must prove his contribution to the conception of the claims by clear and convincing evidence. *Id.* at 1461. “However, ‘an inventor’s testimony respecting the facts surrounding a claim of derivation or priority of invention cannot, standing alone, rise to the level of clear and convincing proof.’” *Id.* (quoting *Price v. Symsek*, 988 F.2d 1187, 1194 (Fed. Cir. 1993)). The rule is the same for an alleged co-inventor’s testimony. *Ethicon*, 135 F.3d at 1461. Thus, an alleged co-inventor must supply evidence to corroborate his testimony. *Id.* Whether the inventor’s testimony has been sufficiently corroborated is evaluated under a “rule of reason” analysis. *Price*, 988 F.2d at 1195. Under this analysis, “[a]n evaluation of all pertinent evidence must be made so that a sound determination of the credibility of the [alleged] inventor’s story may be reached.” *Id.*

Corroborating evidence may take many forms. Often contemporaneous documents prepared by a putative inventor serve to corroborate an inventor’s testimony. *See id.* at 1195–96. Circumstantial evidence about the inventive process may also corroborate. *See Knorr v. Pearson*, 671 F.2d 1368, 1373 (CCPA 1982) (“[S]ufficient circumstantial evidence of an independent nature can satisfy the corroboration rule.”). Additionally, oral testimony of someone other than the alleged inventor may corroborate. *See Price*, 988 F.2d at 1195–96. The bottom-line question is whether the “picture painted by all of the evidence taken collectively” gives the Court “an abiding conviction” that the alleged inventor’s assertion of prior conception is “highly probable.” *See id.* at 1196.

ANALYSIS

Man Wah argues that Burwell contributed to four concepts for the utility patents at issue in this case: (1) the use of a photosensitive cell placed on the flange of the cup holder to control the lighting of the cup holders in response to the ambient lighting conditions; (2) the

use of a light pipe with attached LED light sources to illuminate the inside of the cup holders; (3) the use of a primary/secondary cup holder arrangement to control the lighting of the cup holders from a single set of controls; and (4) the use of a touch sensor control switch on the flange of the cup holder. (Man Wah's Post-Hearing Br. at 2, Docket # 271.) Raffel argues that Man Wah failed to demonstrate by clear and convincing evidence that Burwell is a joint inventor because: (1) Burwell's alleged contributions were not inventive; (2) Burwell did not conceive the claimed contributions to the subject utility patents; and (3) Burwell's testimony regarding his alleged contributions is not sufficiently corroborated. (Raffel's Post-Hearing Resp. Br. at 13, Docket # 273.)

Burwell testified that he conceived of the photocell (Nov. 16 Tr. 31–33), light pipe (Nov. 16 Tr. 29–30), primary/secondary circuit arrangement (Nov. 16 Tr. 38–39), and touch sensor (Nov. 16 Tr. 34–35). However, Burwell's testimony must be corroborated. *See Price*, 988 F.2d at 1195 (“[T]he inventor's testimony requires corroboration before it can be considered.”). Man Wah argues that “substantial evidence” supports Burwell's inventorship testimony. (Man Wah Br. at 22.) Specifically, Man Wah points to three categories of evidence it argues supports Burwell's claims: (1) Seidl's deposition testimony (*id.* at 22–25); (2) Burwell's unique skill set within Raffel (*id.* at 25–26); and (3) physical and documentary evidence (*id.* at 26–29). I will address each alleged subject matter in turn.

1. Photocell

Man Wah argues that Burwell conceived of using a photosensitive cell, placed on the flange of the cup holder, to control the lighting of the cup holders in response to the ambient lighting conditions. (Man Wah Br. at 8.) Man Wah asserts that the photocell is an essential

feature of the '293 Patent (cl. 3 and cl. 4); the '968 Patent (cl. 7 and cl. 21); and the '603 Patent (cl. 8 and cl. 16), created by Burwell. (*Id.* at 9.)

Raffel argues that the photocell idea was a well-known concept in the prior art; thus, even if Burwell provided Raffel with the information, this does not make him a joint inventor. (Raffel Br. at 13–14, citing *Ethicon*, 135 F.3d at 1460 (“One who simply provides the inventor with well-known principles or explains the state of the art without ever having ‘a firm and definite idea’ of the claimed combination as a whole does not qualify as a joint inventor.”).) Raffel further argues that the evidence of record contradicts Burwell’s testimony that he invented the idea to use a photocell. (*Id.* at 18–22.)

Man Wah relies solely on Seidl’s July 31, 2019 deposition testimony to corroborate Burwell’s testimony regarding use of a photocell. As summarized above, Seidl testified that after returning from the High Point furniture market in October 2005, he sat down with Howman and Burwell to discuss how to add a light to a sample cup holder he received from Berkline at the market. (Seidl Dep. at 44–45.) Seidl testified that Burwell “may have” suggested the photocell (*id.* at 45–46, 49–50) and that he was “pretty sure [Burwell] may have made that suggestion” (*id.* at 46). Although Seidl later testifies at trial that Burwell did not contribute to the photocell idea (Nov. 17 Tr. 296), Man Wah argues this subsequent testimony should be accorded no weight (Man Wah Br. at 31–36).

Even disregarding Seidl’s trial testimony, Seidl’s deposition testimony far from demonstrates that it is highly probable that Burwell contributed to the idea of a photocell. Seidl’s testimony is rife with uncertainty: he testifies that Burwell “might” have brought up the idea of using a photocell (Seidl Dep. at 46), that Seidl was “pretty sure [Burwell] may have made the suggestion” (*id.*), that Seidl “believ[ed] the first time [he] heard [the photocell idea]

was with Mike,” (*id.* at 49), and that Burwell “probably” came up with the idea of how to mount the photocell (though he also testified that mounting the photocell on the flange was the only logical place to put it) (*id.* at 50).

Furthermore, neither Seidl nor Burwell can pinpoint the timeline of events in this case beyond during “late 2005 and early 2006.” (Nov. 16 Tr. 27–28, 101; Nov. 17 Tr. 279.) Seidl testified that the High Point market took place in October 2005; thus, “late 2005” is presumably no earlier than October 2005. On January 26, 2006, Howman sent an email to Raffel’s patent attorney, Les Miller, that included several attachments depicting the cup holders. (Ex. PTX87.) The first attachment contains a photograph of a cup holder, with the following handwritten notes on the top: “lights on when you turn off the lights” and “lights off when you turn on the lights” (*id.*)—in other words, it references the photocell idea. Howman’s January 26 email also contains 3D renderings with a GPS copyright date of 2005. (Nov. 17 Tr. 289, Ex. PTX87.) Seidl testified that he recalled seeing these drawings, created by GPS, in 2005. (*Id.*) Furthermore, Seidl identified a 3D CAD drawing that he testified was created by Schmidt at GPS and that he first saw it in late 2005 or very early 2006. (Nov. 17 Tr. 279, Ex. PTX 135.) Seidl identified a green dot at approximately the three o’clock position on the rim of the cup holder as the photocell. (Nov. 17 Tr. 279–80, Ex. PTX 135.) Both Howman and Seidl testified that Raffel did not have the ability to produce 3D CAD drawings in-house during the relevant time period. (Nov. 16 Tr. 162, Nov. 17 Tr. 277.) While Man Wah does not dispute that GPS created the 3D CAD drawings, it argues that “GPS was simply creating renderings based on Mr. Burwell’s concepts.” (Man Wah’s Post-Hearing Reply Br. at 8, Docket # 274.)

Beyond Man Wah's failure to provide evidence in support of its assertion that GPS' CAD drawings were renderings of Burwell's ideas, the timing simply does not add up based on the evidence of record. Both Burwell and Alpert testified that they did not work together. (Nov. 16 Tr. 28, Alpert Dep. Tr. 111–12.) Burwell himself is unsure as to exactly when he allegedly conveyed the photocell idea to Seidl. Burwell testified that his initial meeting with Howman and Seidl after the October 2005 High Point market lasted only a couple of minutes (Nov. 16 Tr. 134–35) and that it was “at some point” during his work on the lighted cup holder that he allegedly suggested using a photocell to Seidl (Nov. 16 Tr. 31–32). However, GPS was creating renderings of the cup holders in 2005 and by late January 2006, Raffel was preparing patent disclosure forms for the cup holders containing references to the photo cells. This seems to indicate that the information regarding the cup holders was conveyed to GPS from Raffel sometime before the end of 2005. While it is certainly possible that during this approximately two month period of time Burwell conveyed his photocell idea to Seidl, Seidl conveyed the photocell idea to GPS, and GPS created several CAD renderings before the end of the year, telling a plausible story is insufficient to prove inventorship. Again, the evidentiary standard is clear and convincing evidence. Based on the evidence provided, Man Wah has failed to show that it is “highly probable” that Burwell contributed to the conception of the photocell on the cup holder. *See Price*, 988 F.2d at 1196.

2. Light Pipe

Man Wah argues that Burwell created the concept of using a light pipe with an attached LED light source to illuminate the inside of the cup holders. (Man Wah Br. at 13.) Man Wah asserts that the light pipe is an essential feature of the '293 Patent (cl. 1 and cl. 6); the '882 Patent (cl. 12, cl. 14, and cl. 16), the '968 Patent (cl. 3, cl. 10, and cl. 17); and the

'603 Patent (cl. 5 and cl. 14). In the '293 Patent, Fig. 3 shows: "The lighted element 122, of the exemplary embodiment, takes the form of an elongated member of translucent material, formed into a ring, and having the light source 120 attached thereto for illuminating the lighted element 122." (Ex. PTX1, '293 Patent, col.4 l.64–67.) Raffel argues that the "light pipe" is not a feature claimed in the asserted utility patents. (Raffel Br. at 26.) Specifically, Raffel argues that the '293 Patent does not mention a light pipe; rather, it simply recites the "translucent material" that Burwell acknowledged was already present in the sample cup holder Seidl showed him before his alleged involvement in the project. (*Id.*) Raffel's argument is contrary to the evidence. One need only look at Fig. 3 to see that the "elongated member of translucent material, formed into a ring," is not the "circular flat disk, like a plate," Burwell testified to seeing. (Nov. 16 Tr. 128.) In fact, when Burwell was questioned about Fig. 3 of the '293 Patent, he testified as follows:

Q: Mr. Burwell, can you turn to figure three of PTX 1 . . . Okay. And that's what you saw when Ken Seidl came to you with a lighted cup holder with the on-off button, right?

A. Yes, except -- except it had a -- a clear -- it was a clear disk and not like a ring. (Nov. 16 Tr. 103.) But even though the light pipe is a feature claimed in the utility patents, Man Wah still fails to meet its burden of proving that Burwell conceived of this idea. The only evidence Man Wah offers to corroborate Burwell's testimony as to inventing the light pipe is Seidl's alleged poor understanding of the nature of a light pipe. (Man Wah Br. at 26.) I agree that Seidl's testimony regarding the working of the light pipe was less than fluid. But even assuming that Burwell understands how a light pipe works better than Seidl, this, in and of itself, does not prove that he conceived of the idea. Man Wah also argues that Burwell was the only person at Raffel with any engineering expertise during the relevant time period; thus,

this corroborates his testimony regarding his contributions to the cup holder. (*Id.* at 25–26.) This is factually inaccurate. Seidl, Howman, and Alpert all testified that GPS provided engineering support to Raffel during the relevant time period (Nov. 16 Tr. 162, Nov. 17 Tr. 271, Alpert Dep. Tr. 27, 37) and Schmidt, an engineer from GPS, worked at Raffel two days a week during this time (Nov. 17 Tr. 272, 278). For these reasons, Man Wah has failed to prove by clear and convincing evidence that Burwell conceived the light pipe idea.

3. *Primary/Secondary Arrangement*

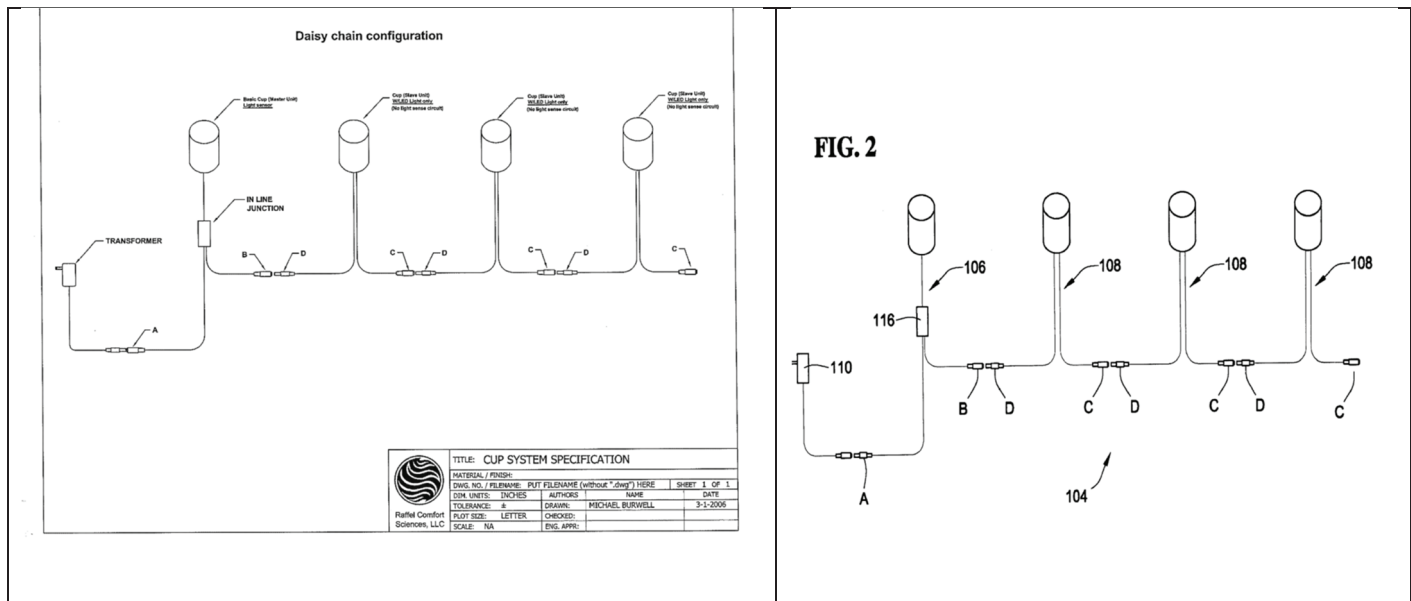
Man Wah argues that Burwell contributed to the concept of the primary/secondary cup holder arrangement to control the lighting of the cup holders from a single set of controls. (Man Wah Br. at 16.) Man Wah asserts that the primary/secondary arrangement is an essential feature of the '293 Patent (cl. 9); the '968 Patent (cl. 6 and cl. 20); and the '603 Patent (cl. 7), created by Burwell. (*Id.* at 16–17.) Man Wah points to Seidl's deposition testimony, Burwell's skill set as the only Raffel employee with engineering experience, the fact Burwell's drawings were used for the figures in the subject patents, and a circuit board Burwell created in March 2006, as corroborating evidence of Burwell's testimony that he conceived of the primary/secondary arrangement.

As with Seidl's testimony regarding the photo cell, his testimony regarding Burwell's alleged contribution to the primary/secondary arrangement is far from convincing. Seidl testifies as follows:

- Q: Do you recall who would have had the idea of using a master/slave configuration to connect the different cup holders?
A: Well, we certainly would have.
Q: "We" meaning you and Mr. Howman and Mr. Burwell?
A: Yeah. I mean - - yeah, Raffel. Yeah, exactly.

(Seidl Dep. at 70.) While *counsel* suggests that “we” includes Burwell, Seidl seems to agree with the premise that *Raffel* came up with the idea. Furthermore, Seidl testifies that he is certain Burwell “drew up” the circuit (*id.* at 51), but drawing up the circuit does not prove that Burwell invented the concept for the cup holders, especially as Seidl testified that Burwell’s job duties included drawing schematics at Seidl’s direction (Nov. 17 Tr. 270–71).

Furthermore, none of Man Wah’s other purported evidence corroborates Burwell’s testimony by clear and convincing evidence. It is true that Burwell drew several circuit schematics dated February 16, 2006 and March 1, 2006, showing the primary/secondary circuit arrangement (Ex. TX-237) and two additional drawings dated March 1, 2006, showing specifications for the primary and secondary cup holders (*id.*). And, comparing Burwell’s drawing (Ex. TX-237) of the “daisy chain configuration” (on the left below) to Fig. 2 of the ‘293 Patent (on the right below), it is clear that Burwell’s drawing was used for the figure.



Even so, this does not prove that Burwell *created* the concept. Again, Seidl testified that Burwell created drawings at Seidl’s direction, and these drawings are dated February and

March 2006. As explained above, by January 2006, Raffel was in contact with its attorney to file a patent disclosure form. Seidl met with Berkline in February regarding implementing the primary/secondary arrangement into its product. (Nov. 17 Tr. 346, Ex. PTX110.) Seidl testified that he needed Burwell to make some basic drawings to better explain the concepts to Berkline. (*Id.* at 330–31.) Given that Seidl was meeting with GPS and Berkline in late 2005 and very early 2006 (Seidl testifies to a January 12 meeting with Berkline) (*Id.* at 311), it seems highly unlikely that Burwell come up with this idea in February 2006, as shown in his drawings. For this same reason, Burwell’s circuit boards, dated March 10, 2006, do not corroborate his testimony. Thus, as to the primary/secondary arrangement, Man Wah has failed to meet its burden of proof.

4. *Touch Sensor*

Finally, Man Wah argues that Burwell contributed to the concept of the touch sensor control switch on the flange of the cup holder. (Man Wah Br. at 19.) Man Wah asserts that the touch sensor is an essential feature of the ’293 Patent (cl. 12); the ’505 Patent (cl. 1 and cl. 8); the ’882 Patent (cl. 1, cl. 7, and cl. 16); the ’968 Patent (cl. 1, cl. 9, and cl. 15); and the ’603 Patent (cl. 1 and cl. 10). (*Id.* at 19–20.) As with the light pipe, Raffel argues that the touch sensor is not a feature claimed in the asserted utility patents. (Raffel Br. at 26.) Raffel argues that, for example, while Claim 12 of the ’293 Patent recites: “A lighted cup holder apparatus as defined in claim 10, wherein said flange comprises an expanded section comprising a control switch or connection,” it does not actually mention a “touch sensor.” (*Id.*) Raffel, however, does not seem to seriously contend that the “control switch” recited in the patent does not include a “touch sensor.” In fact, Raffel acknowledges that “control switch” may encompass a touch sensor. (*Id.*) Thus, I will not address this argument further.

As with the light pipe, however, simply because the touch sensor is a concept claimed in the patents does not mean that Man Wah has met its burden of demonstrating Burwell is a co-inventor. As above, Man Wah points to Seidl's deposition testimony and a physical, undated circuit board (Ex. 243B and Ex. 224) that Burwell testified he created "in early 2006 . . . around the same time" as the ones dated March 2006 (Nov. 16 Tr. 47–48). As to Seidl's deposition testimony, Seidl testifies that "we" came up with the touch sensor, without further defining who "we" included. (Seidl Dep. at 64.) While Man Wah tries to connect Seidl's earlier "we" with counsel's subsequent question asking Seidl to define "we" in the context of who created the primary/secondary arrangement (Man Wah Br. at 24), there is no indication that Seidl's later answer serves to define Seidl's previous use of "we." Furthermore, the two white circuit boards that Burwell testifies depicts the touch sensor circuits are undated and even if I assume they were created in March 2006, as with the circuit boards explained above in conjunction with the primary/secondary arrangement, these were created months after the touch sensor concept was introduced. Seidl testified that he met with Berkline in January 2006 regarding the touch sensor controls (Nov. 17 Tr. 311) and even more telling, GPS had created 3D CAD renderings copyrighted 2005 that depict touch sensor controls on the flange of a cup holder (PTX 87).

Again, Man Wah's primary retort to these timing issues is that these "later documents created by GPS" are merely renderings created based on Burwell's concepts. (Man Wah Reply Br. at 8.) But again, Man Wah has the burden of proof on this issue. Burwell cannot pinpoint when he allegedly conceived of these designs beyond sometime in late 2005 or early 2006. He averred in his October 2019 declaration that while he manufactured the circuit boards on March 10, 2006, he "obviously" developed the design prior to that time. (PTX 136,

Burwell Decl. ¶ 14.) But it is not “obvious” from the circuit boards themselves that: (1) Burwell conceived of the concept and (2) that his concept was relayed to GPS sometime in 2005 so that they could create CAD drawings depicting a touch sensor. The evidence Man Wah presents falls far short of giving me an “abiding conviction” that Burwell’s assertion of co-inventorship is “highly probable” as to the touch sensor. *See Price*, 988 F.2d at 1196.

For all these reasons, I find that Man Wah has failed to meet its burden of establishing by clear and convincing evidence that Burwell is a joint inventor of the utility patents asserted by Raffel in this case. As such, I will not order Raffel to obtain a certificate of correction naming Burwell a joint inventor.

CONCLUSION

As the Federal Circuit stated in *Price*, because an alleged inventor’s testimony, standing alone, cannot satisfy the clear and convincing evidence standard, “frequently a case turns on which of two inventors must shoulder the burden of proof.” 988 F.2d at 1194. Such is the case here. Man Wah bears the burden of proof in this case and the evidence it has presented falls short of corroborating Burwell’s testimony by clear and convincing evidence. Man Wah relies on Seidl’s deposition testimony, Burwell’s drawings, and Burwell’s circuit boards to corroborate Burwell’s testimony. But “the picture painted by all of [this] evidence taken collectively” does not give me “an abiding conviction” that Burwell’s assertion of co-inventorship is “highly probable.” *See id.* at 1196. Thus, Raffel is not ordered to obtain a certificate of correction naming Burwell a joint inventor for the utility patents at issue in this case.

ORDER

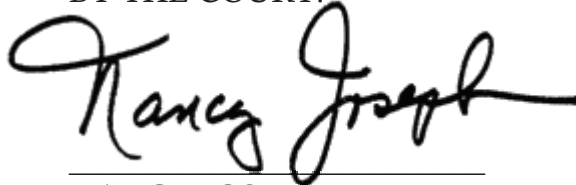
NOW, THEREFORE, IS IT ORDERED that the defendants' request to correct inventorship is **DENIED**.

IT IS FURTHER ORDERED that the following motions to seal are **GRANTED**:
(Docket # 258 and Docket # 262.)

IT IS FURTHER ORDERED that pursuant to the Amended Scheduling Order dated October 1, 2020, all summary judgment motions must be filed within thirty (30) days of the date of this decision. (Docket # 221.)

Dated at Milwaukee, Wisconsin this 23rd day of March, 2021.

BY THE COURT:

A handwritten signature in black ink, reading "Nancy Joseph". The signature is fluid and cursive, with a horizontal line drawn underneath it.

NANCY JOSEPH
United States Magistrate Judge